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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/921,844	08/03/2001	Gary K. Michelson	101.0084-01000	8295
22882	7590	07/01/2009		
MARTIN & FERRARO, LLP 1557 LAKE O'PINES STREET, NE HARTVILLE, OH 44632			EXAMINER SNOW, BRUCE EDWARD	
			ART UNIT 3738	PAPER NUMBER
			MAIL DATE 07/01/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

09/921,844

**Applicant(s)**

MICHELSON, GARY K.

**Examiner**

Bruce E. Snow

**Art Unit**

3738

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 219 and their depending claims is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 219 and their depending claims is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 6/15/09
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notices of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/15/09 has been entered.

### ***Response to Arguments***

Applicant's amendments and arguments filed 6/15/09 have been fully considered. The amendment to page 14 of the specification overcame the objected to under 35 U.S.C. 132(a).

Regarding the combination rejection of Abei et al in view of Fraser, applicant argues that the combination projection would not have a rearward facet that overlies an adjacent projection as claimed and would be appear as shown in applicant's drawing. It is the Examiner's position that one skilled in the art would have kept the projections immediately adjacent as taught by Cottle to produce a higher density of projections per area to better resist repulsion. Results would have been predictable. Further see at least SU 1107854 teaching such spacing is known in the art. Regarding claim 219, the Examiner agrees that Fraser fails to specifically teach a projection with four facets, but states "*although fins 18 are described and illustrated as having a substantially wedge-shape with a triangular profile, one of ordinary skill in the art will appreciate that other*

*shapes may be used as well*". This Examiner does appreciate that; to have four facets instead of three, as illustrated, is not patentable subject matter.

Regarding Aebi teaching that the spikes 28 are slanted toward the anterior end, note that anterior end does not have to be the "leading end". Leading end is a functional description describing the approach direction used to implant the device.

Regarding the rejected under 35 U.S.C. 103(a) as being unpatentable over Paul et al (6,258,125) in view of Fraser (6,592,624), the Examiner has reversed the rejection to be Fraser in view of Paul et al. This is believed to negate all of applicant's arguments.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

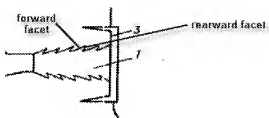
#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and it's depending claims are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over SU 1107854 (applicant provided 10/21/05).

SU teaches a spinal implant comprising a plurality of surface projections formed on said upper and lower surfaces of said implant. At least a first and a second of said surface projections each having at least one forward facing facet directed at least in part toward said leading end and at least one rearward facet directed at least in part toward said trailing end, each of said forward facet and rearward facet having a length and a slope, the length of said forward facet being longer than the length of said rearward facet, the slope of said rearward facet being steeper than the slope of said forward facet, at least a portion of said rearward facet of said first surface projection overlying a portion of said forward facet of said second surface projection.



All other limitations are self-evident to one skilled in the art.

Under 35 U.S.C. 103(a) as obvious over SU 1107854, many of applicant's dependent claims claim a wide range of limitations, for example, elements/materials/shapes/tools/etc which lack criticality in the specification, the use of any limitations in lieu of those used in the references solves no stated problem and

produces no benefits and would have been an obvious matter of design choice for someone skilled in the art. Additionally, these limitations are well known in the prosthetic art and would have been obvious to one having ordinary skill with the spinal implant of SU with predictable results.

Under 35 U.S.C. 103(a) as obvious over SU 1107854, additionally, it would have been obvious to one having ordinary skill to have used any bone growth material known in the art or to have constructed the implant from any material known in the art for their known properties and characteristics.

All claims are rejected under 35 U.S.C. 103(a) as being unpatentable over Abei et al (6,482,233) in view of Fraser (6,592,624).

Referring to figure 6, Abei et al teaches a teaches a spinal implant comprising a plurality of pyramid-shaped projections 28 formed on the upper and lower surfaces of the implant which are slanted to *"allow for ease of insertion and avoid retroplulsion after insertion (4:30 et seq.)"* The projections are slanted towards the trailing end 14, therefore, having a forward facing facet which is longer than a rearward facet. The projections further include side facets and a rectangular base. However, Abei et al is silent regarding the length of the forward facing facet having a maximum length as measured along a line parallel to the maximum length of the base, the maximum length of the forward facet greater than the maximum length of the base.

Referring to figure 1C, Fraser teaches a similar spinal implant having surface projections 18 wherein the rearward facet 34 can either have a positive slope or

negative slope. It would have been obvious to one having ordinary skill in the art to have formed the rearward facet of Abei et al forming a negative slope such that the length of the forward facing facet is greater than the maximum length of the base such that the projections dig into the bone and better resist expulsion. Therefore, the maximum length of the forward facet is greater than the maximum length of the base (claim 219).

Regarding claim 219, it is noted that Fraser fails to specifically teach a projection with four facets, but states *"although fins 18 are described and illustrated as having a substantially wedge-shape with a triangular profile, one of ordinary skill in the art will appreciate that other shapes may be used as well"*. This Examiner does appreciate that; to have more than three, as illustrated, is not patentable subject matter.

Regarding claim 1, with the rearward facet having a negative slope, the adjacent projections of Abei et al would produce "at least a portion of said rearward facet of the first surface projection overlying a portion of said forward facet of said second surface projection". It is the Examiner's position that one skilled in the art would have kept the projections immediately adjacent as taught by Cottle to produce a higher density of projections per area to better resist repulsion. Results would have been predictable. Further see at least SU 1107854 teaching such spacing is known in the art.

Many of applicant's dependent claims claim a wide range of limitations, for example, elements/materials/shapes/tools/etc which lack criticality in the specification, the use of any limitations in lieu of those used in the references solves no stated problem and produces no benefits and would have been an obvious matter of design

choice for someone skilled in the art. Additionally, these limitations are well known in the prosthetic art and would have been obvious to one having ordinary skill.

Additionally, it would have been obvious to one having ordinary skill to have used any bone growth material known in the art or to have constructed the implant from any material known in the art for their known properties and characteristics.

All claims are rejected under 35 U.S.C. 103(a) as being unpatentable over Fraser (6,592,624) in view of Paul et al (6,258,125).

Referring to figure 1C, Fraser teaches a spinal implant having surface projections 18 wherein the rearward facet 34 can either have a positive slope or negative slope. Fraser states:

*(12) Although fins 18 are described and illustrated as having a substantially wedge-like shape with a triangular profile, one of ordinary skill in the art will appreciate that other shapes may be used as well. It is also understood that the dimensions, i.e., height, length, and width of the fins may vary, as may the overall geometry of the fins.*

Paul et al also teaches a spinal implant having projections with four facets as shown in figures 9, 10A, and 11.

It would have been obvious that one skilled in the art would have appreciated that the "other shapes" and "overall geometry of the fins" would include four faceted projections as taught by Paul et al with predictable results. This would have produced the projection as claimed in applicant's claim 219 wherein the length of the forward facing facet having a maximum length as measured along a line parallel to the



maximum length of the base, the maximum length of the forward facet greater than the maximum length of the base.

Regarding claim 1, Fraser et al teaches, "fins 18 may vary in shape, number, and in their placement on either or both of the end plates 12, 14." It is the Examiner's position that it would have been obvious to one skilled in the art would have positioned the projections immediately adjacent as taught known in the art to produce a higher density of projections per area to better resist repulsion. Results would have been predictable.

Many of applicant's dependent claims claim a wide range of limitations, for example, elements/materials/shapes/tools/etc which lack criticality in the specification, the use of any limitations in lieu of those used in the references solves no stated problem and produces no benefits and would have been an obvious matter of design choice for someone skilled in the art. Additionally, these limitations are well known in the prosthetic art and would have been obvious to one having ordinary skill.

Additionally, it would have been obvious to one having ordinary skill to have used any bone growth material known in the art or to have constructed the implant from any material known in the art for their known properties and characteristics.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruce E. Snow whose telephone number is (571) 272-4759. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Corrine McDermott can be reached on (571) 272-4754. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bruce E Snow/  
Primary Examiner, Art Unit 3738